

10/018651

JC13 Rec'd PCT/PTO 18 DEC 2001

UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Group: Attorney Docket # 1914

Applicant(s) : MERKEL, W., ET AL

Serial No. :

Filed :

For : LINK ELEMENT FOR WINDSHIELD WIPERS

SIMULTANEOUS AMENDMENT

December 17, 2001

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

SIRS:

Simultaneously with filing of the above identified application
please amend the same as follows:

In the Claims:

Cancel all claims without prejudice.

Substitute the claims attached hereto.

REMARKS:

This Amendment is submitted simultaneously with filing of the above identified application.

With the present Amendment applicant has amended the claims so as to eliminate their multiple dependency.

NOT TO BE FILED AS A TRADE SECRET DOCUMENT

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Consideration and allowance of the present application is most respectfully requested.

Respectfully submitted,


Michael J. Striker
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Claims

1. A link element (10) for windshield wipers, which is adjoined by a wiper rod (28) and is manufactured out of a metal sheet (16) by means of stamping and bending, in which starting from a longitudinally aligned covering wall (40), at least one wall part of a side wall (38, 42) is comprised of a number of sheet metal layers produced by being bent inward by 180°, and a hanging device (32, 52, 54; 60; 58, 64) for a tension spring is fastened to the innermost sheet metal layer and protrudes into a free space (30) between side walls (38, 42), characterized in that a slot (52) lateral to the longitudinal direction (56) of the link element (10) is let into the innermost sheet metal layer from the bottom edge (50) and a pin (54) is inserted into this slot.
2. The link element (10) according to claim 1, characterized in that the slot (52) and the covering wall (40) enclose an acute angle (φ) whose vertex points toward the linking end (34).
3. The link element (10) according to [one of the preceding claims] claim 1, characterized in that the pin (54) is press-fitted and/or secured in detent fashion between the outer sheet metal layers of the side walls (38, 42).
4. The link element (10) according to the preamble to claim 1, characterized in that except for a short side (62), an elongated piece (58) is respectively cut out from each of the innermost sheet metal layers of the side walls (38, 42) in the longitudinal direction (56) and is perforated at its free end; these pieces are bent inward by approx. 90° and their ends overlap so that the holes (64) coincide.
5. The link element (10) according to claim 4, characterized in that the ends (66) are bent at right angles toward the linking end (34).
6. The link element (10) according to the preamble to claim 1, characterized in that the width of the covering wall (40) and the height of the side walls (38, 42) decrease

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toward the wiper rod (28) and the contour of the stamped blanks made of sheet metal (14) favorably covers a rectangle (24) that has the maximal width and length of the blank, characterized in that the innermost sheet metal layers of each of the side walls (38, 42) are respectively adjoined by an inner wall (44) and when bent into place, these inner walls extend parallel to the covering wall (40) and have congruent hooks (32) formed onto their edges oriented toward one another; these hooks are bent by 90° into the free space (30) and their free ends point toward the wiper rod (28).

7. The link element (10) according to [one of the preceding claims] claim 1, characterized in that a wiper rod (28) is formed onto it.

Claims

1. A link element (10) for windshield wipers, which is adjoined by a wiper rod (28) and is manufactured out of a metal sheet (16) by means of stamping and bending, in which starting from a longitudinally aligned covering wall (40), at least one wall part of a side wall (38, 42) is comprised of a number of sheet metal layers produced by being bent inward by 180°, and a hanging device (32, 52, 54; 60; 58, 64) for a tension spring is fastened to the innermost sheet metal layer and protrudes into a free space (30) between side walls (38, 42), characterized in that a slot (52) lateral to the longitudinal direction (56) of the link element (10) is let into the innermost sheet metal layer from the bottom edge (50) and a pin (54) is inserted into this slot.

2. The link element (10) according to claim 1, characterized in that the slot (52) and the covering wall (40) enclose an acute angle (φ) whose vertex points toward the linking end (34).

3. The link element (10) according to claim 1, characterized in that the pin (54) is press-fitted and/or secured in detent fashion between the outer sheet metal layers of the side walls (38, 42).

4. The link element (10) according to the preamble to claim 1, characterized in that except for a short side (62), an elongated piece (58) is respectively cut out from each of the innermost sheet metal layers of the side walls (38, 42) in the longitudinal direction (56) and is perforated at its free end; these pieces are bent inward by approx. 90° and their ends overlap so that the holes (64) coincide.

5. The link element (10) according to claim 4, characterized in that the ends (66) are bent at right angles toward the linking end (34).

6. The link element (10) according to the preamble to claim 1, characterized in that the width of the covering wall (40) and the height of the side walls (38, 42) decrease

toward the wiper rod (28) and the contour of the stamped blanks made of sheet metal (14) favorably covers a rectangle (24) that has the maximal width and length of the blank, characterized in that the innermost sheet metal layers of each of the side walls (38, 42) are respectively adjoined by an inner wall (44) and when bent into place, these inner walls extend parallel to the covering wall (40) and have congruent hooks (32) formed onto their edges oriented toward one another; these hooks are bent by 90° into the free space (30) and their free ends point toward the wiper rod (28).

7. The link element (10) according to claim 1, characterized in that a wiper rod (28) is formed onto it.